

LEGEND

	ELECTRICAL SERVICES SWITCHBOARD.
	SWITCHBOARD BY OTHERS.
	SINGLE POWER OUTLET.
	DOUBLE POWER OUTLET.
	SPECIAL PURPOSE POWER OUTLET.
	SINGLE PHASE ISOLATOR.
	THREE PHASE ISOLATOR.
	JUNCTION BOX.
	CONDUIT ROUTE.
	x DENOTES CONDUIT TYPE.
	ELECTRICAL FLOOR BOX.
	LIGHTING PRESENCE DETECTOR SWITCH.
	ONE-WAY LIGHT SWITCH.
	TWO-WAY LIGHT SWITCH.
	CIRCUIT LINE.
	SWITCH LINE.
	POWER CIRCUIT DESIGNATION. DENOTES DB AND CIRCUIT.
	NBN PREMISES CONNECTION DEVICE.
	COMMUNICATIONS OUTLET.
	INTERCOM CALL STATION.
	INTERCOM CHIME / BELL.
	INTERCOM HANDSET.
	ELECTRICAL EQUIPMENT AS NOTED.
	SUPPLY AUTHORITY CODE COMPLIANT LV TARIFF METER.
	FUSE.
	SINGLE PHASE.
	THREE PHASE.
	CURRENT TRANSFORMER C/W REMOVABLE LINK.
	FUSE LINK.
	COMBINED FUSE SWITCH.
	CIRCUIT BREAKER.
	ISOLATOR.
	RESIDUAL CURRENT DEVICE.
	CONTACTOR - NORMALLY OPEN.
	CONTACTOR - NORMALLY CLOSED.
	E1: GENERAL LED EMERGENCY LIGHT.
	EX: EMERGENCY LED EXIT LIGHT.
	Lx: LIGHT FITTING C/W NON-MAINTAINED EMERGENCY BATTERY PACK. TYPE AS NOTED.
	L1: 300 x 1200 LED FLAT PANEL.
	L2: 300 x 600 LED FLAT PANEL.
	L3: STAIRWELL WALL LIGHT.
	L4: IP65 WALL MOUNT LED BATTEN.

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	L5: UNDER STAIR LED BATTEN.
	L6: IP65 LED BATTEN.
	L7: IP65 NON-MAINTAINED UNSWITCHED EMERGENCY LED BATTEN.
	L8: LED HIGH BAY.
	L9: 9m POLE C/W LED CARPARK LIGHT..
	L10: RECESSED DOWNLIGHT.
	L11: LED STRIP LIGHT UNDER OVERHEAD CUPBOARD.

NOTES

1.0 EXTENT OF WORKS

THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE ELECTRICAL SERVICES.
- CO-ORDINATION.
- INSPECTIONS.
- TESTING AND COMMISSIONING.
- MAINTENANCE.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- LIGHTING.
- COMMUNICATIONS CABLING.
- ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE ELECTRICAL SERVICES INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

SUPPLY ALL LABOUR, MATERIALS, EQUIPMENT, AND ALL OTHER ITEMS, WHETHER MENTIONED IN DETAIL OR NOT, REQUIRED FOR THE SATISFACTORY COMPLETION OF THE ELECTRICAL SERVICES INSTALLATION, LEAVING IN FULL WORKING ORDER TO THE SATISFACTION OF THE PROJECT MANAGER.

ACCEPT FULL RESPONSIBILITY FOR LIAISING, ARRANGING AND CO-ORDINATION ALL WORKS THAT HAVE AN EFFECT ON OR WILL BE AFFECTED BY THE ELECTRICAL SERVICES.

2.0 WORKMANSHIP

ENSURE THAT THE WORK IS PERFORMED BY THE HOLDER OF A CURRENT ELECTRICAL SUB CONTRACTOR LICENSE. ENSURE THE INSTALLATION AND ALL COMPONENTS, FIXTURES, FITTINGS, OUTLETS AND CABLES ARE SUPPLIED AND INSTALLED TO A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS. ENSURE ALL MATERIALS AND COMPONENTS OF A SIMILAR TYPE ARE OF THE SAME MANUFACTURER AND INSTALLED IN A UNIFORM MANNER.

IT IS THE ELECTRICAL SUB CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE INSTALLATION IS FIT FOR PURPOSE AND IS PROVIDED AS A COMPLETE WORKING INSTALLATION. IT IS THE ELECTRICAL SUB CONTRACTORS RESPONSIBILITY TO PROVIDE ALL COMPONENTS, FITTINGS, FIXTURES, SYSTEMS, PROGRAMMING ETC IRRESPECTIVE OF THE LEVEL DETAILED IN THE DOCUMENTS SUCH THAT THE INSTALLATION IS PROVIDED AS A COMPLETE WORKING INSTALLATION.

CONCEAL ALL WIRING AND CONDUITS UNLESS APPROVED BY THE ARCHITECT. ENSURE ALL COMPONENTS, EQUIPMENT AND MATERIALS SUPPLIED ARE NEW, UNUSED, DESIGNED AND SELECTED TO ENSURE SATISFACTORY OPERATION UNDER VARYING ATMOSPHERIC, CLIMATIC, HUMID TROPICAL CONDITIONS WITHOUT DISTORTION AND DETERIORATION IN ANY PART AFFECTING EFFICIENCY AND RELIABILITY OF THE SYSTEMS. DESIGN AND SELECT ALL EQUIPMENT TO PROVIDE THE NECESSARY SAFETY TO HUMAN LIFE AND PROPERTY DURING OPERATION AND MAINTENANCE WITH PARTICULAR ATTENTION GIVEN TO ELECTRICAL SAFETY AND SEGREGATION PRECAUTIONS.

CHECK THE FINISHED PAINTWORK AROUND THE AREA OF EACH INSTALLATION AND TOUCH UP ALL DAMAGED PARTS AND FINISHES AFTER THE INSTALLATION OF THE ELECTRICAL SERVICES.

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDER'S PROGRAM. ENSURE ALL FINAL LOCATIONS OF OUTLETS AND FITTINGS ARE CO-ORDINATED ONSITE WITH THE ARCHITECT AND ALL OTHER SERVICES, TO THE APPROVAL OF THE PROJECT MANAGER. ALLOW TO CO-ORDINATE THE FINAL LOCATION OF ALL EQUIPMENT, FITTINGS, & OUTLETS, SUCH THAT THEY ARE INSTALLED IN ACCORDANCE WITH THE AS3000 RESTRICTED ZONES, AND ARE NOT COVERED INAPPROPRIATELY.

ENSURE THAT ALL METAL SURFACES ARE SUITABLY PROTECTED AGAINST CORROSION, AND THAT ALL PLASTIC MATERIALS ARE UV STABILISED.

PROVIDE ALL MATERIALS AS NEW, AND OF THE HIGHEST CLASS AVAILABLE FOR THEIR RESPECTIVE TYPES. ENSURE ALL ASPECTS OF THE WORK ARE OF A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS.

3.0 STANDARDS

IRRESPECTIVE OF INFORMATION CONTAINED IN THE ELECTRICAL SERVICES DOCUMENTS OR IN INSTRUCTIONS, IT IS THE ELECTRICAL SUB CONTRACTORS RESPONSIBILITY TO ENSURE ALL ELECTRICAL SERVICES WORKS ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE ELECTRICAL SERVICES DOCUMENTS AND INSTRUCTIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO THE PLACING OF ORDERS, FABRICATION OR INSTALLATION OF THE ITEMS/METHODS IN DISCREPANCY.

- NCC BUILDING CODE OF AUSTRALIA.
- ELECTRICITY ACT.
- ELECTRICAL SAFETY ACT.
- AS3000.
- AS3008.
- WORKPLACE HEALTH AND SAFETY ACT.
- TELECOMMUNICATIONS ACT.
- ACMA REQUIREMENTS.

4.0 AUTHORITIES

ENSURE ALL OF THE ELECTRICAL SERVICES COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AUTHORITIES HAVING JURISDICTION OVER THE SITE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- ACMA.
- LOCAL COUNCIL.
- LOCAL SUPPLY AUTHORITY.
- STATE GOVERNMENT DEPARTMENT OF ENVIRONMENT AND HERITAGE.
- QLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.
- QLD FIRE AND RESCUE AUTHORITY.

NOTES

5.0 CABLES

UNLESS OTHERWISE SPECIFIED, INSTALL AND TERMINATE CABLES IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. DETERMINE THE FINAL ROUTES TO SUIT THE BUILDING STRUCTURE AND SITE CONDITIONS. UNLESS NOTED OTHERWISE, PROVIDE ALL 240 VOLT POWER AND LIGHTING WIRING AS 2.5mm<sup>2</sup> TWIN & EARTH STRANDED COPPER CONDUCTORS, PVC INSULATED 0.6/1kV V75 GRADE TO AS3174, PROTECTED BY A 20 AMP CIRCUIT BREAKER. ALL CONDUIT AND FITTINGS TO BE RIGID UPVC TO AS2053, UNLESS NOTED OTHERWISE.

6.0 POWER DISTRIBUTION

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES THE CONNECTION OF A NEW UNDERGROUND ENERGEX SERVICE TO NEW CONSUMERS MAINS AND A NEW MSB. ARRANGE WITH ENERGEX TO HAVE THE NEW CONSUMERS MAINS CONNECTED. THE NEW MSB IS TO CONTAIN ENERGEX METERING FOR THE COMMON AREA AND EACH OF THE TWO TENANCIES. THE MSB IS TO ALSO CONTAIN A COMMON AREA DISTRIBUTION BOARD DB-M AND SWITCHGEAR TO SUPPLY THE TWO TENANCY DISTRIBUTION BOARD DB-1 AND DB-2. ALL OF THE CIRCUITS AND OUTLETS NECESSARY TO COMPLETE THE INSTALLATION ARE TO BE PROVIDED AS REQUIRED. THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- POWER DISTRIBUTION.
- EARTHING.
- REMOVAL OF EXISTING REDUNDANT INSTALLATION.
- CIRCUITS.
- ISOLATORS AND OUTLETS.
- TESTING AND COMMISSIONING.

7.0 LIGHTING

ALL OF THE LIGHT FITTINGS, LAMPS AND ACCESSORIES ARE TO BE PROVIDED AS PART OF THIS CONTRACT. THE LIGHTING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- LIGHTING.
- LIGHT FITTINGS AND ACCESSORIES.
- LAMPS.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL.
- LIGHTING SUBCIRCUITS.
- TESTING AND COMMISSIONING.

PROVIDE EACH TENANCY AND THE COMMUNAL DISTRIBUTION BOARD WITH EMERGENCY AND EXIT LIGHTING FACILITIES.

PROVIDE EACH EMERGENCY AND EXIT LIGHTING FACILITY AS A SINGLE POINT EMERGENCY LIGHTING SYSTEM THAT COMPLIES WITH THE LATEST ISSUE OF ALL PARTS AS2293 AND THE RELEVANT PARTS OF THE NCC BCA. INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS MAINTAINED WITH HE LAMP PERMANENTLY ON SUPPLIED VIA AN UNSWITCHED ACTIVE MAINS SUPPLY WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE, THE LAMP IS TO REMAIN ON SUPPLIED BY THE EMERGENCY PACK. SINGLE LAMP MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ALWAYS ON.)

INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS NON-MAINTAINED AS FOLLOWS:

- IF THE FITTING IS NOT BEING SWITCHED, THE LAMP IS TO REMAIN OFF WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON SUPPLIED BY THE EMERGENCY PACK. UNSWITCHED SINGLE LAMP NON-MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ON ONLY WHEN THE MAINS SUPPLY IS NOT AVAILABLE.)
- IF THE FITTING IS BEING SWITCHED, THE LAMP IS TO BE SUPPLIED AND CONTROLLED WITH THE LOCAL GENERAL AREA LIGHTING WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON, SUPPLIED BY THE EMERGENCY PACK. (THE LAMP IS ON WHEN TURNED ON WITH THE LOCAL GENERAL LIGHTING OR THE MAIN SUPPLY IS NOT AVAILABLE.)

INSTALL EMERGENCY LIGHTS SUCH THAT THE STATUS INDICATOR L.E.D. IS CLEARLY VISIBLE AND THE TEST BUTTONS ARE READILY ACCESSIBLE. LABEL EACH CIRCUIT BREAKER WHICH CONTROLS THE UNSWITCHED ACTIVE TO EXIT LIGHTS WITH A LABEL FIXED ADJACENT; ENGRAVED PLASTIC LAMINATE, GREEN BACKGROUND WITH WHITE CHARACTERS:-

WARNING  
INTERRUPTING SUPPLY WILL DISCHARGE  
EMERGENCY LIGHTING BATTERIES

PROVIDE WRITTEN EVIDENCE OF THE INITIAL COMMISSIONING AND TESTING AND TESTING FOR THE DURATION OF THE MAINTENANCE PERIOD IN ACCORDANCE WITH AS 2293.2.

THIS EVIDENCE IS TO BE IN THE FORM OF A LOG BOOK SIMILAR TO THE GENERAL LIGHTING SERVICE PTY LTD "EMERGENCY LIGHTING MAINTENANCE LOG BOOK AND MANUAL" WHICH IS TO BE PROVIDED BY THE ELECTRICAL SUB-CONTRACTOR AND HAVE ALL ENTRIES FULLY COMPLETED AND BE PRESENTED FOR INSPECTION AT PRACTICAL COMPLETION. THE LOG BOOK IS TO BE RETAINED BY THE ELECTRICAL SUB-CONTRACTOR FOR THE DURATION OF THE MAINTENANCE PERIOD, AND THE SIX MONTHLY TEST AND MAINTENANCE RESULTS ENTERED. THE LOG BOOK IS TO BE PRESENTED FOR APPROVAL AT FINAL COMPLETION (EXPIRY OF THE MAINTENANCE PERIOD) AND WILL BE FORWARDED TO THE OPERATOR FOR THEIR USE.

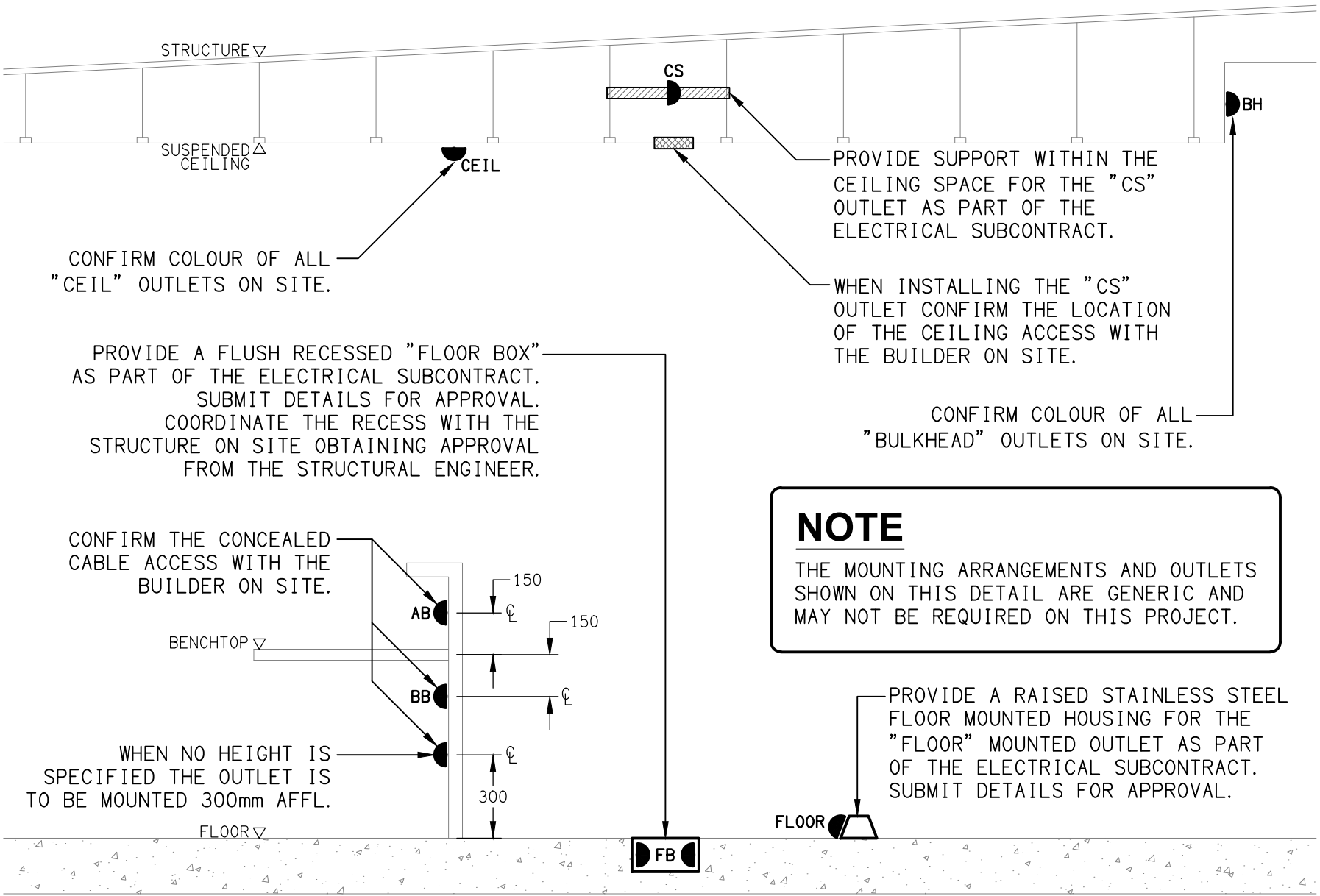
PROVIDE MAINTENANCE OF THE EMERGENCY AND EXIT LIGHTING INSTALLATION INCLUDING RECORDS IN ACCORDANCE WITH THE LATEST ISSUE OF ALL PARTS AS2293 AND THE RELEVANT PARTS OF THE NCC BCA. PROVIDE THE EMERGENCY LIGHTING SYSTEM WITH A SUPPLY SENSING AND TESTING FACILITY IN ACCORDANCE WITH AS 2293.1.

8.0 COMMUNICATIONS

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES A NEW UNDERGROUND NBN LEADIN SERVICE TO A NBN PCD AND DROP CONDUITS TO A NBN NTD IN EACH TENANCY. ARRANGE WITH THE NBN CO TO INSTALL THE LEAD-IN SERVICE.

THE EXCHANGE SERVICES AND ACTIVE EQUIPMENT WILL BE PROVIDED BY THE OPERATOR. THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- NBN LEAD-IN SERVICE.
- NBN PCD.
- NBN DROP CONDUITS TO EACH TENANCY.
- NBN NTD IN EACH TENANCY.



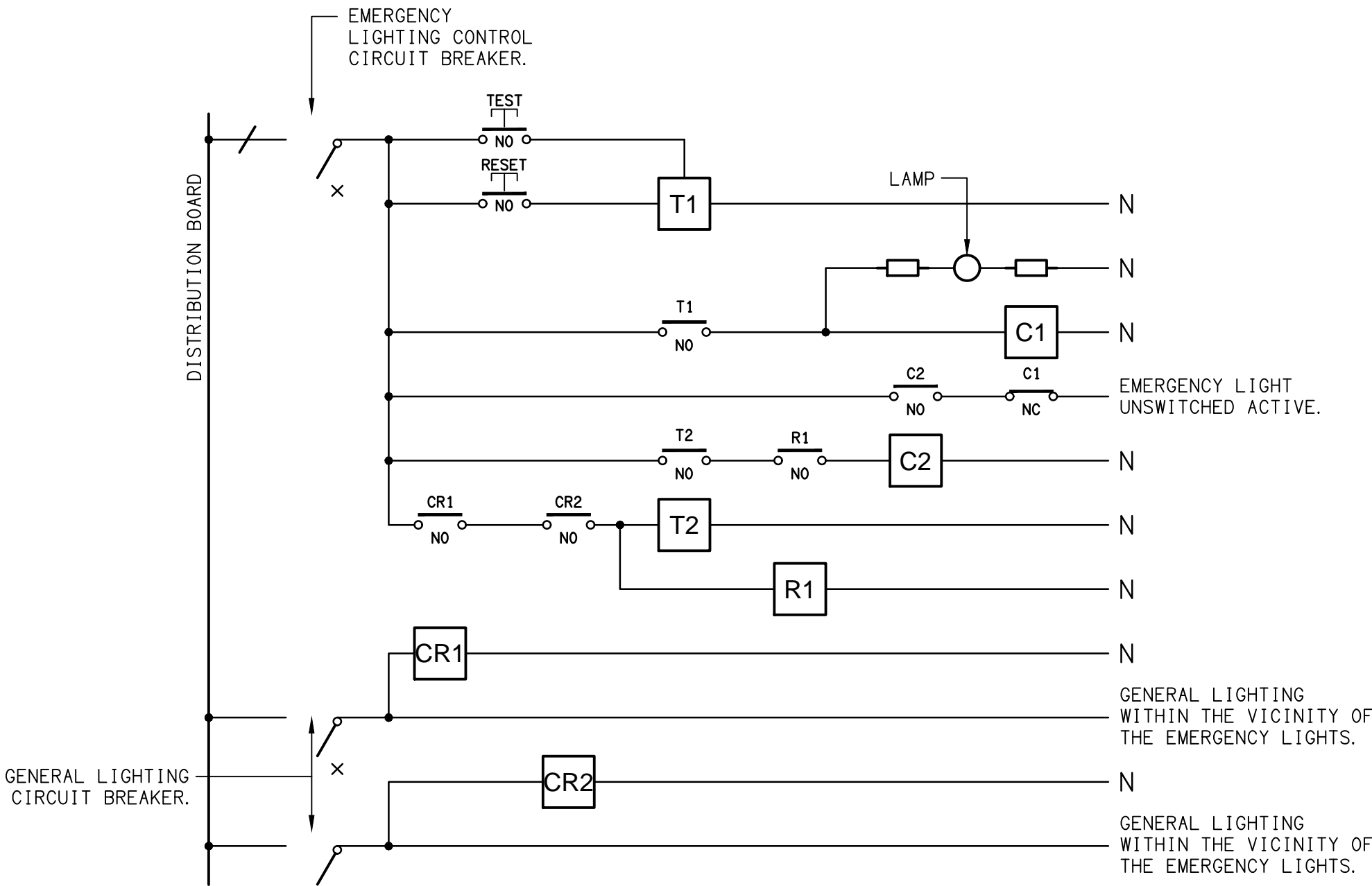
DETAIL

TYPICAL OUTLET MOUNTINGS

NOT TO SCALE

EQUIPMENT:

- TEST – TEST PUSH BUTTON MOUNTED ON THE DISTRIBUTION BOARD ESCUTCHEON.
- RESET – RESET PUSH BUTTON MOUNTED ON THE DISTRIBUTION BOARD ESCUTCHEON.
- LAMP – AMBER TEST INDICATING LAMP MOUNTED ON THE DISTRIBUTION BOARD ESCUTCHEON.
- T1 – ADJUSTABLE 0-3 HOUR TIMED RELAY.
- T2 – 15 MINUTE RUN-ON TIMER TO OPERATE UPON THE RETURN OF MAINS POWER.
- Cx – CONTACTOR x.
- CRx – CONTROL RELAY x.
- Rx – RELAY x.



NOTES

1. THE EMERGENCY LIGHT UNSWITCHED ACTIVE / GENERAL LIGHTING SWITCHED ACTIVE CIRCUIT ARRANGEMENT AND CONTROL IS TYPICAL FOR ALL CIRCUITS SUPPLYING EMERGENCY LIGHTS.
2. PROVIDE ADDITIONAL CONTROL RELAYS (CRx) CONFIGURED AS PER CR1 AND CR2 FOR ALL ADDITIONAL LIGHTING CIRCUITS THAT SUPPLY LIGHTS IN THE VICINITY OF THE EMERGENCY LIGHTS.

SCHEMATIC

EMERGENCY LIGHTING

NOT TO SCALE

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